The Jackson Laboratory

C.B10-*Dmd* ^{mdx} /Mmjax

MMRRC Stock No: **41197-JAX** | mdx/BALBc

Congenic, Spontaneous Mutation

ORDER AT MMRRC JAX

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These spontaneous *Dmd*^{mdx} mutant mice do not express dystrophin and may be useful for studying Duchenne muscular dystrophy.

Donating Investigator

Dongsheng Duan, University of Missouri

READ MORE +

GENETIC OVERVIEW

Genetic Background	Generation

Dmd^{mdx}

Allele Type	Gene Symbol	Gene Name
Spontaneous	*Dmd*	dystrophin, muscular dystrophy

VIEW GENETICS

RESEARCH APPLICATIONS

Cell Biology Research
Neurobiology Research
Sensorineural Research
Mouse/Human Gene Homologs

VIEW ALL RESEARCH APPLICATIO

Details

Detailed Description

Duchenne muscular dystrophy (DMD) is a progressive muscular disorder caused by an imbalance between muscle degeneration and regeneration resulting in muscle degeneration, necrosis, accumulation of fat and fibrosis, and insufficient regeneration/loss of myofibers. The genetic cause of DMD are mutations of the dystrophin muscular dystrophy gene (*DMD*) on the X chromosome. The *Dmd*^{mdx} mutation in mice has a termination codon in exon 23 that is predicted to result in a truncated protein. Heterozygous females are viable and fertile with no gross phenotypic abnormalities. Homozygous females and hemizygous males are viable and fertile with myopathic features of DMD; although the myopathology is both less severe than the human disease course and variable by mouse strain genetic background.

The donating investigator indicates that mice on the BALB/cJ background exhibit the classic pathology and muscle force reduction observed in the original C57BL/10 background. Lifespan has not been determined in this background.

Development

Control Suggestions

Selected References

Genetics

Dmd^{mdx}

Disease/Phenotype

Disease Terms

Research Areas By Phenotype

Mammalian Phenotype Terms by Genotype

References

Technical Support

CONTACT TECHNICAL SUPPORT

Genotyping Protocols

End Point Analysis:DmdEnd Point
Genotyping resources and troubleshooting

Breeding Considerations

While maintaining a live colony, mice carrying this X-linked mutation are bred as homozygote female x hemizygote male.

Additional Breeding and Husbandry Support

Citation

When using the mdx/BALBc mouse strain in a publication, please cite the originating article(s) and include MMRRC stock #41197 in your Materials and Methods section.

Animal Health Reports

Facility Barrier Level Descriptions

Production of mice from cryopreserved embryos or sperm occurs in a maximum barrier room, G200

THE JACKSON LABORATORY'S GENOTYPE PROMISE

The Jackson Laboratory has rigorous genetic quality control and mutant gene genotyping programs to ensure the genetic background of JAX® Mice strains as well as the genotypes of strains with identified molecular mutations. JAX® Mice strains are only made available to researchers after meeting our standards. However, the phenotype of each strain may not be fully characterized and/or captured in the strain data sheets. **Therefore, we cannot guarantee a strain's phenotype will meet all expectations.** To ensure that JAX® Mice will meet the needs of individual research projects or when requesting a strain that is new to your research, we suggest ordering and performing tests on a small number of mice to determine suitability for your particular project. We do not guarantee breeding performance and therefore suggest that investigators order more than one breeding pair to avoid delays in their research.

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Phone: 207-288-6470
Email: TechTran@jax.org

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